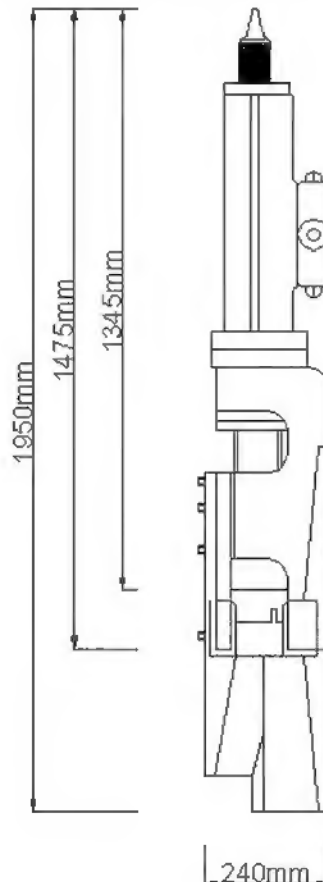


**i) Introduction.**

The 300N Air hammer is a compressed air driven drop hammer suitable for driving a range of trench sheets and light piles. The hammer cannot be used for extracting piles. This booklet is intended to provide information for users of the hammer and to draw the client's attention to practical aspects of handling, use and daily maintenance which need to be considered in drawing up method statements for a safe system of work.

**ii) Specifications & Dimensions.**

Weight	-	430kg.
Overall length	-	1.95m.
Length of inserts	-	0.50m.
Recommended Compressor size	-	3.0m <sup>3</sup> / min. (110cfm).
Hose Required	-	25mm (1") c/w Snap Coupling.
Pressure Required	-	6.3kg/cm <sup>2</sup> (90 psi).

Note: - The pressure at the compressor should be approx 7.73kg/cm<sup>2</sup> (110psi) to allow for pressure losses in the hose.

Compressed air should be as dry as possible. Not more than 15m (50ft) of hosepipe of 25mm (1") diameter should be used. If the compressor is further away the air should be led through a pipe of at least 1 1/4" diameter.

The 300N Air Hammer can be set to drive the sheet profiles available from Mabey Hire Limited by using different guides.

iii) **Manpower**

The construction regulations require that personnel employed are suitably trained and experienced and supervised by a competent person.

The main activities associated with the use of the 300N Air Hammer are: -

- 1). Unloading of the delivery vehicle.
- 2). Connection of the hammer to the excavator.
- 3). Lifting of the hammer.
- 4). Connection to a suitable compressor.
- 5). Maintenance.

iv) **Plant & Lifting.**

A suitable appliance is required for the off-loading and suspension of the hammer. The weights and dimensions of the hammer are provided in this booklet.

A single leg 19mm chain, 1.5m long c/w shackles at each end is provided with the hammer. Code JCBP-028.

v) **Return of Equipment off-hire.**

Client should ensure that on removal, the equipment is returned clean and that it is loaded to the satisfaction of the driver and is securely restrained to the vehicle bed.

vi) **Set Up Procedure.**

- Check inserts match sheets to be driven – Contact Mabey Hire Limited to ensure hammer is set up for your sheet profile.
- Fill lubricator bottle before use and check at intervals during use, hydraulic oil should be used for this.
- Blow out air hose to remove any obstructions or water before connecting onto hammer. Do not use worn out hose – pieces of lining may blow into the hammer & clog the valve & ports.

vii) **Operation.**

- First pitch the sheet into position; sheets **must** be vertical for driving. It is recommended that a guide frame is used to maintain the alignment of the sheet during driving.
- Lift the hammer onto the sheet ensuring correct positioning, lower until anvil / hammer is resting on sheet.
- When driving the full weight of the hammer must rest on the pile. Release weight from chain – **CHAIN MUST BE KEPT SLACK DURING DRIVING.**
- Slowly open the air flow to start the hammer. Once the hammer settles in, open up the air flow to suit ground conditions. When driving in very soft ground the pile may tend to move ahead of the hammer and the anvil block thus be driven onto the anvil block stop: the blow of the hammer must then be reduced by throttling down on the air supply. When driving is very hard and a high air pressure is being used, the hammer will bounce on the pile and this may also cause the anvil block to strike the anvil block stop. The air supply must then be regulated to prevent bouncing. The maximum number of strokes per minute for which the hammer is rated (about 400 strokes per minute) should never be exceeded.
- Carefully monitor sheet progress during driving and when refusal conditions are met (i.e. Sheet stops moving and / or deformation starts to occur to the sheet) stop driving, continuing will only cause unnecessary damage.
- Once the sheet has been driven and the air supply is turned off, the hammer can be lifted from the sheet.
- If the hammer fails to work properly, or has become irregular in operation this is likely to be due to dirt or particles of rubber hose clogging the ports in the valve chest. If this occurs the hammer will be erratic in its' action or may not work at all.

viii) **General**

*Since our policy is one of continual improvement, components may vary in detail from the descriptions given in this publication.*